DOCUMENT RESUME

ED 459 786 IR 058 281

AUTHOR	Wise, Alicia
TITLE	How Can Evaluation Get Us to the Heart of Learning in the Electronic Age?
PUB DATE	2001-08-00
NOTE	8p.; In: Libraries and Librarians: Making a Difference in the Knowledge Age. Council and General Conference: Conference Programme and Proceedings (67th, Boston, MA, August 16-25, 2001); see IR 058 199.
AVAILABLE FROM	For full text: http://www.ifla.org.
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Distance Education; *Educational Policy; *Educational Technology; *Evaluation Methods; Foreign Countries; Higher Education; *Information Services; Use Studies
IDENTIFIERS	*Electronic Resources; United Kingdom

ABSTRACT

This paper discusses the evaluation of electronic resources. The first section addresses the importance of a clear policy framework, including the goals of a survey on higher education research and policy issues concerning online education, instructional technology, and distance learning. The second section discusses the importance of a robust methods framework. This section describes the following four strands of a three-year project in the United Kingdom with the purpose of developing a national user behavior monitoring and evaluation framework: a general survey of end users of all electronic information services; a real time survey of the use of JISC (Joint Information Systems Committee)-funded services; a general survey of provision; and a qualitative longitudinal monitoring of use. Key issues highlighted by the project are summarized. (Contains 22 references.) (MES)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 459 786

67th IFLA Council and General Conference August 16-25, 2001

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

A.L. Van Wesemael

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Code Number: 119-141-E
Division Number: V
Professional Group: Acquisition and Collection Development
Joint Meeting with: -
Meeting Number: 141
Simultaneous Interpretation: -

How can evaluation get us to the heart of learning in the electronic age?

Alicia Wise
Joint Information Systems Committee
DNER Office,
London , United Kingdom
E-mail: alicia.wise@kcl.ac.uk

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Introduction

Evaluating the impact of access to electronic information is a key challenge globally for memory institutions such as archive, libraries, and museums. This is because of their need to carefully manage limited resources to best serve users' needs, and to justify to purse-holders that this investment represents good value for money. As these purse-holders are often educational institutions or government departments, value for money must generally be measured not in value to an individual user but in terms of contribution to the creation of a knowledge economy.

Too often evaluation of access to electronic resources is bogged down in the processes of managing that access. For example, an interim evaluation of the UK's National Electronic Site Licensing Initiative (Richardson et al. 2000) produced the following major conclusions:

- NESLI has achieved much in a rapidly-changing and complex environment. It has done very well in difficult circumstances.
- There is widespread support from all stakeholders for the principle of a single negotiating body for e-journals on behalf of all UK universities. NESLI constitutes a significant advance in the way new business deals are transacted in the developing electronic marketplace and is being closely monitored in many other countries.
- Progress in agreeing deals, getting them accepted by libraries and achieving end user take up has been slow because of the complexity of the process. Nevertheless there are signs of gathering momentum and support from all the necessary stakeholders.

IR058281

BEST COPY AVAILABLE

- Although it needs to be negotiated in each case and the legal complexities can be daunting, the model licence has been a major success in providing the framework for significant deals.
- The offers that have been made have been of value to some libraries but the different situations of the libraries means that a single offer cannot meet all needs.
- Evaluating complex deals in a limited timescale has led to many libraries being unable to take up offers.
- Offering the service through a single portal has advantages in providing one access point for end users but is seen as a restrictive practice by many stakeholders concerned about a single service undertaking all activities.

The point here is not about the NESLI service -- it is that negotiating and managing access to electronic resources is such a complicated business that our evaluation activities rarely penetrate to actual user experiences. Sometimes we get hints of the widespread managerial changes that are revolutionising information professions, and there is increasing anecdotal evidence to suggest that some users are by-passing traditional printed resources if they possibly can. What we need to evaluate is whether people learn from, and use, information in a new way when they can get at it electronically.

Two key things are needed to help us evaluate access to electronic resources more effectively. The first is a clear policy framework. The second is a robust methods framework.

A Clear Policy Framework

Every institution, every region, every country will have a different set of policy pressures that might be applied to the evaluation of access to electronic resources. For example, in the UK the government is investing in Further Education colleges to ensure that each has Internet connections and access to high-quality electronic information and materials. Key objectives for the Further Education sector as a whole include increasing participation from communities that are traditionally socially-excluded, increasing retention rates for students who begin courses, and improving rates for their successful conclusion of these courses.

It would be easy for these pre-existing policy pressures to be applied simply to the evaluation of electornic resources. For example, in the UK we might be asked what percentage increase in retention rates will be achieved by spending £100,000 pounds on access to electronic learning materials.

The answers would not necessarily get any of us very far. The answers would depend on the very mass of management issues they we should be trying to penetrate: where would the money come from, how would awareness of the available resources be promoted, how would information professionals and course lecturers be trained to feel confident in their use, etc., etc., etc.

The challenge is on: information professionals must be part of a wider policy debate about the ways in which electronic accesss to information can/should be expected to contribute to the creation of a knowledge economy. For example, routine access to electronic resources for all would facilitate the learning and sharing of basic computing skills.

There are many efforts underway to stimulate these policy debates, but it is unclear how the varied communities of practice with a shared interest are joining their efforts together. Are policy advisors taking a lead? Are educational or economic think tanks? Are library associations?

One interesting experiment that is underway is spear-headed by the Andrew W. Mellon Foundation in the US. It is conducting a survey on higher education research and policy issues concerning online education, instructional technology, and distance learning. The outcomes of this exercise should be enlightening, and could be usefully modelled in other countries. Key goals of the survey are to guage:

1. The greatest issue of concern regarding the use of instructional technology in higher education.

2. Whether the use of instructional technology in on-campus contexts if believed to affect the quality of teaching.

3. The perceived promise of distance education.

4. Whether instructional technology may enhance access to or equity in higher education, or has the potential to grow enrollment and reaching/marginalising new types of students.

5. The characteristics of high-quality and effective online learning.

6. Perceived potential impacts that the use of instructional technology might have on academic values, processes, or governance.

7. The economic benefits, if any, to using instructional technology, and the opportunity costs of large investments in instructional technology and distance leaerning.

8. The potential impacts on existing campus resources.

9. The likely changes that the use of instructional technology are likely to bring, and likely sources of resistance to these changes.

10. Valuable avenues for empirical research on the use of instructional technology, the growth of online education, and the emergence of the new distance learning ventures.

A Robust Methods Framework

Once the challenges to be addressed with access to electronic resources are clear, then the right questions can be asked. It is then that a robust methods framework will be essential for measuring progress toward our goals.

Explicit evaluation methodology has been the focus of many projects looking at institutions (e.g. Lubans 2000, Parnell 2001, Squires 2001), media types (e.g. Ehrmann 1997), or specific subject areas (e.g. Porter and Greenstein 1997).

Delving deeper into the literature of any discipline is likely to reveal a range of articles on computer applications and their impact on scholarship. Evaluating access to electronic resources will clearly need to involve reflective practitioners such as these. For example, in my own discipline of archaeology the literature has seen first the introduction of computing applications, then excited singing from the choir of the convinced, followed by a rather pessimistic backlash, and finally by more mature reflection and evaluation (Aldenderfer 1998, Allen et al. 1990, Bewley et al. 1999, Clark 1996, Gillings and Goodrick 1996, Gillings and Wise 1999, Lock 1995,

Miller and Richards 1995, Orton 1999, Richards and Robinson 2000, Wheatley 1993, and Wise 2001).

In the UK a three-year project has been funded with the explicit purpose of developing a national User Behaviour Monitoring and Evaluation Framework (Rowley 2000).

The project has four strands, all due to be complete in July 2002. These are:

A. *General survey of end users of all electronic information services* described as a single broad-based sample survey of patterns of use and non-use of all electronic information services by librarians, academics and students administered through face-to-face or telephone interviews to ensure accurate sampling of all relevant sub-populations.

B. *A 'real time' survey of the use of JISC-funded services* through a combination of Web based questionnaires, session logs, and user password data to profile users.

C. G*eneral survey of provision* thorugh a combination of a Web survey of resource access provided by individual universities, with telephone polls of purchasing intentions, backed up by a small number of face to face interviews with key informants to profile service provision.

D. *A qualitative longitudinal monitoring of use* through an ongoing programme of longitudinal qualitative evaluation centred around a selection of institutions and subject, and an associated programme of one-off studies on the behaviour and needs of specific disciplinary groups.

Preliminary results (Rowley 2000) from the first year of this monitoring and evaluation framework are promising, although they inevitably highlight the many complexities and managerial issues still facing information professionals.

Key issues highlighted include:

1. The diversity of the UK university community. There are institutions where staff and students have very limited access, and library web sites are only just being established. There are academic staff who demonstrate innovative approaches to the integration of electronic resources in learning, and there are other staff who believe that electronic resources have no relevance for their activities. National initiatives, specifically provision of the JANET network and data centres hosting commercially-licenced resources, are cited as clearly having some impact in levelling the national playing field.
2. Key policy issues include government agenda on widening access and participation in education and regular, rigourous quality reviews of educational provision. These influence attitudes about access to electronic resources and can present problems.
3. Managerial issues facing library and information services are very serious. Collection development is frustrated by changing access and purchase arrangements for sources such as electronic journals. Budgets devolved from the library to departments further complicates matters.
4. Academic staff act as key 'gatekeepers' to student learning, and this privileged relationship should be drawn upon. It is essential to build their skills and confidence.
5. General Web search engines and known Web sites are the first resort for most academic queries, as well as for many personal searches, done by undergraduate students. There is little if any evidence to suggest that they use the many tools designed by their institution library and information service to facilitate their general searching, or that they appreciate

the potential time savings offerred by these tools. General Web skills tuition needs to continue or be increased.

6. Graduate students often have a well developed knowledge of specific sources relevant to their studies, but in other respects do not appear to use electronic resources in a substantially different way than undergraduate students.
7. Use of commercially-licensed databases and journals was low.

One of the deliverables from this interesting project will be a transferable 'toolkit' for evaluating the stage of an institution's development in terms of facilitating access to, and use of, electronic resources.

This monitoring and evaluation framework project has already had the welcome affect of stimulating some debate about evaluation and the role of academic resources in the UK higher education community (e.g. Lonsdale and Urquart 2001) and will no doubt continue to stimulate and challenge in upcoming years. Greater international co-ordination of similar initiatives would be very welcome, as would debate in the library and information community.

Another key area of development is in obtaining fair, comparable usage statistics about online resources. Much of this work is stimulated by library requirements to justify/challenge high subscription prices for electronic subscriptions. This area is a minefield, however, with widely varying practices used by publishers and libraries to record, measure, and report usage statistics. Some high-profile groups have taken the daring step of publishing conclusions about user behaviour based on usage statistics currently available. While these conclusions may be borne out in time, it seems sensible to await further implementation of the ICOLC Usage Statistics Guidelines (ICOLC 1998) and detailed implementation studies being undertaken by the PALS group in the UK (PALS Usage Statistics Working Group 2001), and the ARL e-metrics project in the US.

Bibliography

Aldenderfer, M.
1998 Quantitative Methods in Archaeology: A Review of Recent Trends and Developments. *Journal of Archaeological Research* 6(2):91-120.

Allen, K. M. S., S. W. Green, and E. B. W. Zubrow (editors)
1990 *Interpreting Space: GIS and Archaeology*. Taylor & Francis, London.

Bewley, R, D Donaghue, V Gaffney, M van Leusen, and A Wise
1999 *Archiving Aerial Photography and Remote Sensing Data*. Oxbow Books, Oxford.

Clark, A
1996 *Seeing Beneath the Soil: Prospecting Methods in Archaeology*, 2nd edition. Batsford, London.

Ehrmann, S C
1997 The Flashlight Project. http://www.learner.org/edtech/rscheval/flashlight/toc.html

Gillings, M and G T Goodrick
1996 Sensuous and Reflexive GIS: exploring visualisation and VRML. *Internet Archaeology* 1. Available online at http://intarch.ac.uk/journal/issue1/gillings_index.html.

Gillings, M and A L Wise
1999 *GIS Guide to Good Practice*. Oxbow Books, Oxford.

ICOLC
1998 *Guidelines For Statistical Measures Of Usage Of Web-Based Indexed, Abstracted, And Full Text Resources*. http://www.library.yale.edu/consortia/webstats.html

Lock, G
1995 Archaeological Computing, Archaeological Theory and Moves Toward Contextualism in *Computer Applications and Quantitative Methods in Archaeology* edited by J. Huggett and N. Ryan with E. Campbell, C. Orton, and S. Shennan. BAR International Series 600. Pages 13-18.

Lonsdale, R and C Urquart
2001 Electronic information resources for higher education: something amassed or amiss? *UK OnLine User Group News* 12(3): 35-37.

Lubans, J
2000 *Internet Use Among Third Year Students at Duke University, Durham, North Carolina, USA*. http://www.lib.duke.edu/lubans/study4b.html.

Miller, P and J Richards
1995 The good, the bad, and the downright misleading: archaeological adoption of computer visualisation in *Computer Applications and Quantitative Methods in Archaeology* edited by J. Huggett and N. Ryan. Tempus Reparatum, Oxford.

Orton, C
1999 Plus ça change? - 25 years of statistics in archaeology in *Archaeology in the Age of the Internet: Proceedings of the 25th Anniversary Conference of CAA, Birmingham, April 1997* edited by L. Dingwall, S. Exon, V. Gaffney, S. Laflin, and M. van Leusen. BAR International Series 750. Archaeopress, Oxford.

PALS Usage Statistics Working Group
2001 *Vendor Based Usage Statistics Collection*
http://www.jisc.ac.uk/curriss/collab/c6_pub/uswg/index.html

Parnell, S
2001 *Ripple on the pond: libraries and change in distance education*.
http://www.library.unisa.edu.au/papers/ripple.htm.

Porter, S and D Greenstein (editors)
1997 *Scholars' Information Requirements in a Digital Age*.
http://ahds.ac.uk/public/uneeds/un0.html

Richards, J and D Robinson
2000 *Digital Archives from Excavation and Fieldwork: Guide to Good Practice*, Second Edition. Oxbow Books, Oxford.

Richardson, S M, C W Olphert, K D Eason, S D P Harker, and C McKnight

2000 *NESLI Interim Evaluation*. http://www.jisc.ac.uk/pub00/nesli_evaluation_report.html

Rowley, J
2000 JISC User Behaviour Monitoring and Evaluation Framework First Annual Report. http://www.jisc.ac.uk/pub00/m&e_rep1.html

Squires, D
2001 *Second Interim Report on Evaluation Results of the MALIBU Hybrid Library Project*. http://www.kcl.ac.uk/humanities/cch/malibu/reports/2ndinterimeval.htm

Wheatley, D
1993 Going Over Old Ground: GIS, Archaeological Theory and the Act of Perception in *Computing the Past* edited by J. Andresen, T. Madsen, and I. Scollar. Aarhus University Press, Aarhus. Pages 133-138.

Wise, A L
2001 Modelling Quaternary Environments in *Handbook of Archaeological Sciences* edited by D R Brothwell and A M Pollard. John Wiley and Sons, Chichester, England. Pages 111-120.